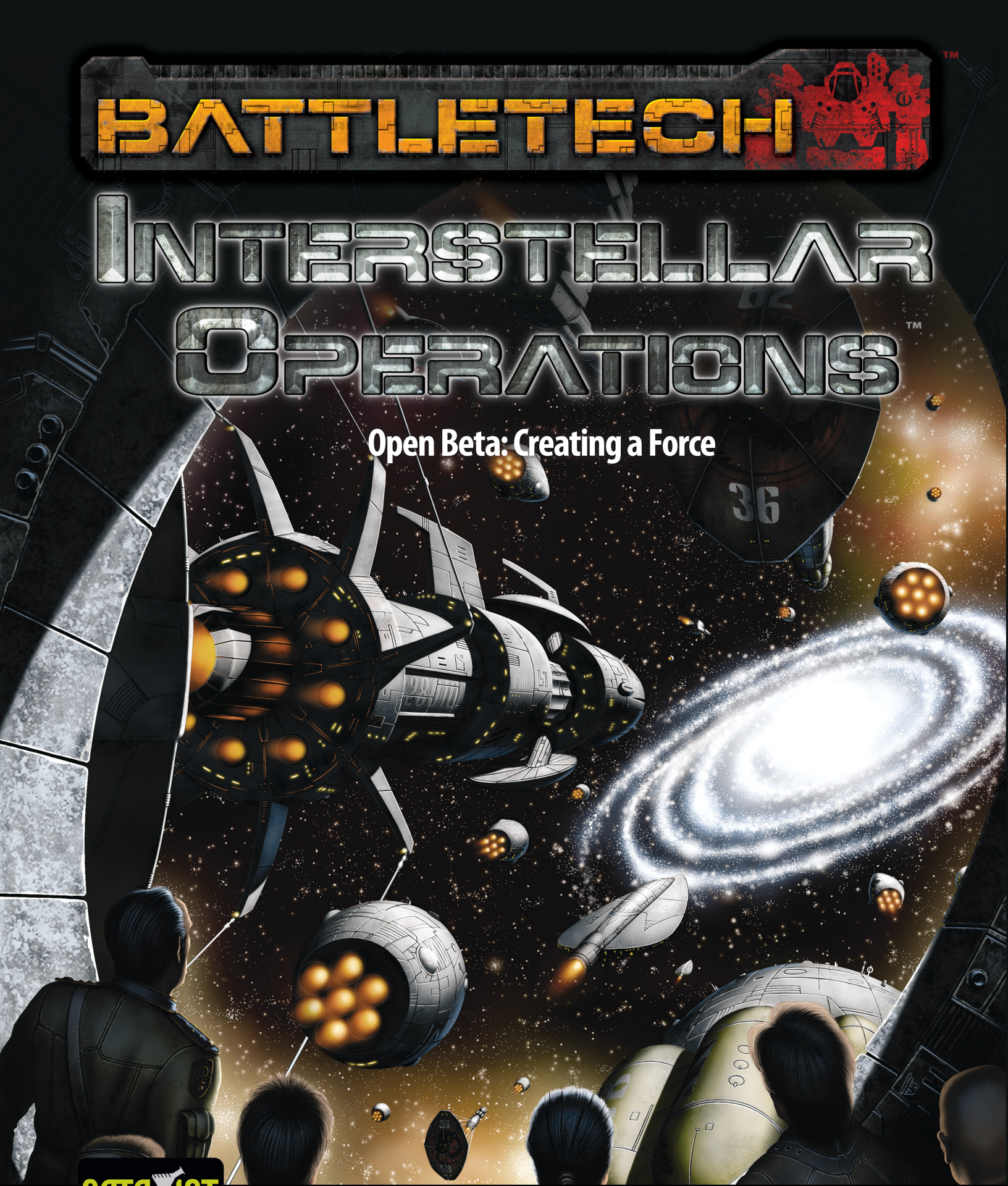
BATTLETECH™

INTERSTELLAR OPERATIONS™

Open Beta: Creating a Force



CATALYST game labs™

This chapter is intended to allow players to produce military forces of almost any type, and to do so relatively quickly. Significant freedom is granted in the process, requiring some restraint on the part of the players. On the other hand, the resulting forces are considered to be the products of Advanced Rules and thus not suited for tournament play, so if players are happy with the resulting forces, that is all that matters.

Terminology: These rules use the same terminology as *Total Warfare*: a "unit" refers to any mobile element that can be fielded in a *BattleTech* game. Meanwhile, a "force" denotes all units of a "named" organization. For example, the Snord's Irregulars as of 3067 consisted of two battalions, while the Star League Defense Force Second Army as of 2767 consisted of 4 Corps (6 BattleMech Divisions, 17 infantry divisions and 9 independent regiments), yet both are considered a "force". Regardless of type or size, a "force" denotes all units a player incorporates into the organization he will create and play.

Master Unit List: The Master Unit List is an online resource indexing units found within the *BattleTech* universe. Players can sort through hundreds and hundreds of units, finding their sourcebook location, relevant variants and all their record sheets, and so on. Most importantly for these rules, players can find the C-bill costs of units on that site. The MUL works hand-in-hand with Creating A Force and Force Operations to make building and running your own force as easy and as enjoyable as possible.

Feel free to check it out at: www.masterunitlist.info.

THE STEPS OF FORCE CREATION

Force creation follows four stages, with several steps in each.

Stage 1: Define the Force
- Step 1: Select Force Type
- Step 2: Select Force Background

Stage 2: Select Force Size
- Step 1: Determine Basic Budget
- Step 2: Modify Budget

Stage 3: Procure Equipment and Hire Personnel
- Step 1: Procure Equipment and Hire Personnel
- Step 2: Acquire Large Spacecraft
- Step 3: Force Specialties
- Step 4: Post-Creation Purchases
- Step 5: Determine Support Personnel

Stage 4: Determine Operating Costs
- Step 1: TO&E Completion
- Step 2: Determine Peacetime Costs

In Stage 1, the controlling player selects what type of force they want from one of three types (government, mercenary, or pirate) and determines the force's background (era, faction or originating faction, etc.). These decisions affect the subsequent stages.

In Stage 2, the player rolls randomly to determine the force's basic budget. A number of modifiers alter the basic budget to calculate a final budget.

In Stage 3, the player buys the desired equipment/hires infantry, within the available budget. Most procurement is handled with straight C-bill costs, but some large items such as JumpShips are purchased through rolls against availability charts. Also in this stage, players may add any force specialties. Because the amount of equipment and personnel may differ from the size selected in Step 2 (due to under- or over-spending), the requirements for support personnel (administrators, techs, etc.) are determined at the end of this stage.

In Stage 4, the player tallies up equipment, personnel, and other costs. This is the most laborious stage in force creation and is important only if the player plans to realistically manage force costs and supplies.

STAGE 1: DEFINE THE FORCE

Start by defining the force.

STEP 1: SELECT FORCE TYPE

At the start of game play, the controlling player first determines whether the force will be a government force, a mercenary force, or a pirate force. In the force's history (before game play begins) the force might have been a different type (for example, a government force that was once mercenary but "went regular"), and the Force Operations chapter (see p. **XX**) discusses changing the force type during game play (for example, a government force that turns to piracy). For force creation, what matters is the current force type.

Government Force: Government forces are those that report to a government, though this type is limited to national governments (a House, a major planet within a House, a Periphery state, or a Clan). Specifically excluded are private troops belonging to a corporation and the personal guard of a noble (nobles of lower stature than a national or planetary leader). Government forces have a number of advantages over other force types. First, it is quite reasonable to build government forces up to multi-regimental levels (a Federated Suns RCT, an old Star League division, or a Clan Galaxy), though forces much above the battalion/Trinary level will be unwieldy in game play. Second, government forces have somewhat lower administrative costs than mercenaries and pirates, reflecting administrative support by government departments external to the force. Third, and perhaps most important, government forces can usually depend on regular income and support. The disadvantage is that government forces lack freedom to pick their employer or missions.

Mercenary Force: Mercenary forces gain the freedom to pick and choose employers, at least as much as their bank account allows. In exchange for that freedom comes a lack of certainty. Mercenaries cannot always depend on the next paycheck and, lacking the economy of scale of a government force, have proportionally higher administrative costs. That lack of certainty also tends to manifest by limiting mercenary force sizes to a regiment or less, with most forces smaller than a battalion of BattleMechs (conventional merc forces tend to be slightly larger). Mercenary forces larger than a regiment have certainly existed in the BattleTech universe, sometimes five regiments or more, but these are very rare. Finally, the private guardsmen of most nobles and security forces of corporations are treated as mercenaries due to their relatively small size.

Pirate: Pirates are handled similarly to mercenaries, but differ in a few major points. First, pirates are virtually unemployable (though some may find work from undiscriminating employers) and thus must be "self-employed," raiding for the supplies and spare parts they need to keep operating. Second, pirates rarely have contracts and thus need not share salvage with employers. They also can often operate without paying wages (because pirate troops are not in a position to find transport elsewhere, not to mention facing execution on many worlds). Problems develop when pirates cannot get enough spare parts and munitions to sustain their operations.

Arnold wants to build a small House Davion rapid-response combined arms company, something big enough for his friends in his BattleTech gaming group and able to handle interesting missions, but small enough to be easily managed (he hopes). Hence, he decides on a government force.

STEP 2: SELECT FORCE BACKGROUND

A couple of background details strongly affect force creation: originating faction and era of game play. The options differ between force types selected in Step 1.

Government forces determine faction specifically: a House, a Clan, a major Periphery state, a minor Inner Sphere state (St. Ives Compact, Chesterton Trade League, etc.), the militia of a major planet or minor multi-world Periphery state (if the population is over 100 million or the planet has a military factory), or the SLDF (new or old). A selection of most factions may be found on p. **XX**. Government forces select their era from the Era Table, below.

Mercenary forces select their era from the Force Creation Era Table. (These eras are specific to force creation, reflecting significant changes in technology, industry, and overall wealth.) They also determine an originating faction, the faction from which a majority of the equipment came (if the mercs departed a government within the past 10 to 15 years), which influences the amount of starting funds and available equipment. Viable originating factions include minor governments unsuitable for government-type forces and "nondescript" for mercenaries with origins too diverse or too distant to easily be associated with one originating faction. Mercenaries cannot have Clan origins; Clan forces are always built as government forces.

Pirates select era and originating faction like mercenaries, and likewise may not have Clan origins.

Arnold's friends are having a burst of nostalgia, so as much as he'd prefer to use the fun toys available in the 3070s and stomp WoBblies into the mud, he sets his force in 3025. The others don't have a preference, so Arnold indulges his inner Davionista and makes the force a Federated Suns military force.

FORCE CREATION ERA TABLE

Inner Sphere / Periphery Eras	Description
2100-2412	Early Interstellar States and Unrestricted Age of War, marked by small and novice militaries
2412-2570	Age of War Under the Ares Conventions, an era of growing prosperity and industrial capacity
2571-2650	Reunification War and Early Star League
2651-2750	High Star League, an era of stability and ever-growing technology and military strength.
2751-2820	Fall of the Star League, First Succession War. Despite the grim period, this is, in fact, the peak of human military strength, technology, and prosperity.
2821-2900	Second Succession War and early Third Succession War, where population, industrial, and technological declines really take hold. The average wealth and technology are higher than the Third Succession War until the end of this period.
2901-3049	Third and Fourth Succession Wars. The great malaise of the Succession Wars defines most of the era; the technological revolution at the end of this period really takes hold in the next.
3050-3067	Clan Invasion. Technological recovery sweeps the Inner Sphere, increasing standards of living—and military firepower—dramatically.
3068-3085	Jihad. The impact of the Helm Memory Core reaches its peak in this period before the Jihad wipes it away.
3085-3130	Late Jihad and Brush Wars. While civilians recover through this period, militaries remain much-reduced in size.
Clan Eras	
2800-2840	Exodus Civil War, Pentagon Campaign. The SLDF batters itself into warring fragments and then forces under the Clans, when they are at their smallest and weakest.
2840-3025	Golden Century and beyond. The Clans' population grows from a few million refugees and thus is militarily and industrially smaller than the Clans of the Invasion period.
3025-3072	Invasion-era Clans. The Clans reach the peak of their strength.
3072-3130	Post-War of Reaving. This era only applies to Homeworld Clans; Clans in the Inner Sphere and Periphery use the Inner Sphere/Periphery eras.

STAGE 2: SELECT FORCE SIZE

Next, determine the size of the force.

STEP 1: DETERMINE THE BASIC BUDGET

This step assumes the force's controlling player does not have a strong opinion about force size and is simply looking for a quick start to a new military force. Accordingly, a 2D6 roll is made for the starting budget on the Basic Budget Table. (If the controlling player has a firmer opinion about the size and composition of the force, see Alternative Force Construction in Optional Rules, p. **XX**.)

BASIC BUDGET TABLE

Roll	Funds
2	10,000,000 CB
3	15,000,000 CB
4	20,000,000 CB
5	30,000,000 CB
6	50,000,000 CB
7	60,000,000 CB
8	75,000,000 CB
9	90,000,000 CB
10	120,000,000 CB
11	180,000,000 CB
12	360,000,000 CB

While different currencies are used in different eras, C-bills are used throughout the Force Construction rules as a matter of compatibility with other core rule books. Players may convert them into currencies suiting their era and faction.

Note that large spacecraft (DropShips, space stations, JumpShips and WarShips) are not directly purchased like other forces due to their rarity and expense. Rather, they are handled in Step 3 with random rolls.

Arnold makes a 2D6 roll, getting a 6: 50,000,000 CB. At about five million CB per 'Mech, that'd be about a company. Arnold starts to get an idea for a mixed arms company. A lance of BattleMechs will allow Arnold and his two friends to play MechWarriors, while a lance of tanks and a platoon of infantry will open up missions not suited for BattleMechs alone.

STEP 2: MODIFY BUDGET

The Basic Budget Table supplies funds based on approximate estimates for 3025-era Inner Sphere equipment and personnel. The basic budget is then multiplied by a Faction Multiplier and an Era Multiplier.

This step does not address particularly well-connected or wealthy force founders, as the basic force creation rules may be used without roleplaying input from *A Time of War*. Optional rules for roleplaying modifiers are provided in the Optional Rules section, p. **XX**.

[**Note:** the Faction Multiplier column of the Budget Modification Table is currently a placeholder pending completion of other sections of *Interstellar Operations*.]

BUDGET MODIFICATION TABLE

Faction	Faction Budget Multiplier
2100-2412	x1.00
2412-2570	x1.25
2571-2650	x1.50
2651-2750	x2.00
2751-2820	x2.50
2821-2900	x1.50
2901-3049	x1.00
3050-3067	x1.50
3068-3084	x2.00
3084-3130	x1.00
IS Era	**Era Budget Multiplier**
Nondescript Faction	x0.8
Federated Suns	x1.0
Lyran Commonwealth/Alliance	x1.2
Big Clans (Wolf, Falcon, Bears, etc)	x1.2
Small Clans (Blood Spirit, etc.)	x0.8
Taurian Concordat	x0.8
Outworlds Alliance	x0.6
St. Ives Compact	x0.6
Sarna Supremacy	x0.7
Capellan Hegemony	x0.7
Chaos March Micro-States:	x0.5
Tikonov Grand Union	x0.8
First Star League Royal Force	x1.5
Periphery Independent	x0.5

Arnold's mathematical skills are challenged by the complications his force's background imposes on his budget. Playing a 3025-era (x1.0) force aligned to a major Inner Sphere power (x1.0), his basic budget is unchanged from 50 million CB.

STAGE 3: PROCURE EQUIPMENT AND HIRE PERSONNEL

This step is not just used in force creation, but addresses procurement of new personnel and equipment during game play.

Before diving into purchases, it is recommended that players review Stage 4. As items and personnel are acquired, it will save work later to enter them into a TO&E sheet during Stage 3.

STEP 1: BUY ALL THE STUFF!

This step is straightforward: the controlling player initially rolls to see if a unit can be acquired, and then spends money from the final budget calculated in Stage 2. Costs of personnel and equipment may be calculated using the construction rules in *Tech Manual*, *Tactical Operations*, and *Strategic Operations*, and found in the equipment lists in *A Time of War*. If those are not available, the Equipment Availability Table includes some generic unit prices.

To simplify acquisition, the associated personnel with vehicles (for example, MechWarriors) are acquired at the same time. This also affects availability for purposes of these rules. (The actual equipment procurement and force hiring may happen at different times if the process is roleplayed out.) Green troops are simply worth less than regulars, and elite troops can be worth their weight in gold (which makes them unfortunately hard to hire). As a result, the availability of a vehicle or infantry platoon is raised or lowered by the experience level of the personnel.

EQUIPMENT AVAILABILITY & COST TABLE

Example Unit	Availability	Cost
Light BattleMech or Aerospace Fighter, any Satellite	4	3,000,000
Medium BattleMech or Aerospace Fighter	5	6,000,000
Heavy BattleMech or Aerospace Fighter	6	9,000,000
Assault BattleMech, any Small Craft	8	12,000,000
Light Combat Vehicle	3	500,000
Medium Combat Vehicle	4	1,000,000
Heavy Combat Vehicle	5	1,500,000
Assault Combat Vehicle	7	2,000,000
Conventional Fighter	5	1,000,000
Battle Armor, Single	5	750,000
Conventional Infantry Platoon, Foot	2	1,200,000
Conventional Infantry Platoon, Motorized	3	2,000,000
Conventional Infantry Platoon, Jump or Mechanized	4	2,800,000
ProtoMech, Single	6	1,000,000
Support Vehicle, Light (<5 tons)	2	250,000
Support Vehicle, Medium (6 to 100 tons)	3	750,000
Support Vehicle, Heavy (101 to 1,000 tons)	5	2,250,000
Support Vehicle, Super Heavy (1,001 to 100,000 tons)	7	20,000,000
Availability Modifiers		
Clan equipment for non-Clan force (only possible after 3049)		+5
First Star League equipment for non-Clan force after 2860		+5
First Star League equipment for Clan force		-2
Cross-faction: Inner Sphere/Periphery faction/equipment by another faction (including Nondescript)		+2
Green Experience		-2
Regular Experience		0
Veteran Experience		+2
Elite Experience		+5
Cost Modifiers		
Fusion engine in combat vehicle		x2.0
XL engine in any unit		x2.5
Clan equipment for non-Clan force (only possible after 3049)		x5.0
First Star League equipment for non-Clan force after 2860		x5.0
Tech Rating E equipment		x1.1
Tech Rating F equipment		x1.25

In addition to basic availability, modifiers may apply to the availability of equipment and personnel in this step. For the most part, these modifiers are self-explanatory and represent the ease or difficulty of acquiring certain hardware. The modifier for Clan equipment held by a non-Clan force is simple: whether manufactured, salvaged, stolen or bought, Clan equipment is very expensive for non-Clan factions in any era. Likewise, old Star League-era technology was very difficult for non-Clan forces to acquire during much of the Succession Wars, while the Clans had large stockpiles in their Brian caches that were distributed to second-line forces.

The cross-faction modifier requires some research on the part of the controlling player because it reflects a non-Clan faction attempting to acquire proprietary equipment from another faction, and the window for which the equipment (be it specific weapons or entire 'Mechs) is proprietary is often quite small, particularly during the middle of the 31st century.

Finally, cost multipliers apply to certain types of equipment when using the generic costs in the Equipment Availability & Cost Table. These represent somewhat above-average costs for (primarily) Third Succession War equipment, such as assuming standard fusion engines in BattleMechs and internal combustion engines in vehicles. Advanced equipment (Tech Rating E or F, per equipment availability codes in *Tech Manual* and *Tactical Operations*) are also expensive.

Note that these rules do not assign ownership of equipment: the force might be recruiting a MechWarrior with a personally owned 'Mech or hiring a Dispossessed MechWarrior to pilot a House-owned 'Mech. For purposes of building the force, the costs are the same. Ownership is up to the players to decide.

With the above in mind, procurement is as follows: the controlling player decides on a unit and its experience level, and then rolls 2D6 against the base availability plus any modifiers to see if the unit may be acquired. If the result is equal to or greater than the modified availability, the unit is acquired. The player then subtracts the cost of the unit from the remaining budget.

Only one Availability Roll may be made per unit, and the player cannot go into debt while building the force.

After acquiring a unit, it is recommended the player enter it promptly into a TO&E sheet, to simplify work in Stage 3.

It's now time to see if Arnold's idea for a combined arms company will fit his budget. He starts with the fun units—BattleMechs. Since he's only going to have a lance of them, he wants to put some money into solid heavy 'Mechs. He starts by attempting to acquire some veteran Marauders*—Miller's Marauders is an inspiration to Arnold—and sees that the modified Availability is 8 (6 for a heavy 'Mech and 2 for Veteran status.) To his amazement, his 2D6 rolls are 7, 4, 3, and 5. No* Marauders*, then. His next attempt for a lance is something*

ARNOLD'S WORKSHEET

Subforce	Experience	Ammo Tons	Ammo Cost	Spare Parts Tons	Spare Parts Cost	Fuel Tons	Fuel Cost	Personnel
TDR-5S Thunderbolt	Regular	—	—	—	—	—	—	—
TDR-5S Thunderbolt	Regular	—	—	—	—	—	—	—
GHR-5H Grasshopper	Regular	—	—	—	—	—	—	—
GHR-5H Grasshopper	Regular	—	—	—	—	—	—	—
Bulldog	Regular	—	—	—	—	—	—	—
Bulldog	Regular	—	—	—	—	—	—	—
Bulldog	Regular	—	—	—	—	—	—	—
Bulldog	Regular	—	—	—	—	—	—	—
Foot Laser Platoon	Regular	—	—	—	—	—	—	—
Packrat	Regular	—	—	—	—	—	—	—
Packrat	Regular	—	—	—	—	—	—	—
Packrat	Regular	—	—	—	—	—	—	—
Packrat	Regular	—	—	—	—	—	—	—
CSR-V12 Corsair	Regular	—	—	—	—	—	—	—
CSR-V12 Corsair	Regular	—	—	—	—	—	—	—

more versatile: a pair of regular Thunderbolts *and a pair of regular* Grasshoppers. *As regulars, the Availability for each is only 6, which Arnold is handily able to roll with a 9, 7, 8, and 7.*

After confirming the 'Mechs are available, Arnold has to pay for them. The TDR-5S Thunderbolts *are 5,413,761CB each (per* Tech Manual *cost calculations), and the pair of GHR-5H* Grasshoppers *are 6,024,574CB each. That's 22,876,670CB spent. He enters them into the TO&E sheet and subtracts their cost from his budget.*

Arnold next selects the vehicles. He spots the Bulldog, which is an affordable 1,128,800CB. It has an ammo-independent main gun and effective secondary weapons. Heavy vehicles are an easy roll at Availability 5, and Arnold has no trouble getting four Bulldogs. Four of them are 4,515,200CB. Arnold enters them into the TO&E sheet.

Next, Arnold settles on a platoon of laser foot infantry. The Availability is an easy 2, which Arnold can't fail to roll, and they're a steal at 1,200,000CB. Arnold has no plans to use his infantry on an open battlefield in any case, instead applying them in roleplaying situations like hostage rescues. To transport them, he selects a lance of Packrats (Availability 3, also easily rolled with 6, 7, 5, and 11) at 408,680CB each, for 1,634,720CB.

Finally, still anticipating a Union, *he spends 4,587,916CB on a pair of classic Davion fighters: CSR-V12* Corsairs.

Arnold's company totals 34,814,506CB, leaving him with 15,185,494CB for parts, ammunition, fuel, and other sundries.

STEP 2: ACQUIRE LARGE SPACECRAFT

Acquiring a DropShip, JumpShip, space station or WarShip is handled differently than smaller units. As with prior publications addressing mercenary force creation, large spacecraft are procured with only a 2D6 roll rather than cash expenditures. Because of the vast range of possible spacecraft over the many eras of human history and different levels of availability, formulas rather than a simple table are used to find the target numbers.

The formulas contain several factors. Each one starts with a base equation, usually based on the cost or mass of the spacecraft. After this equation, which applies to any faction and era, other factors apply. Rarity factors will require careful review of Technical Readouts; some suggestions are provided in the Large Spacecraft Procurement Table. Another modifier is crews' skills.

WarShips are only available to government forces under these rules. Mercenaries and pirates can only acquire WarShips through gameplay with a generous gamemaster.

Players should keep in mind that pirates are not very viable without a DropShip and JumpShip unless they plan to operate on one planet (though un-ambitious pirates may note that single-planet piracy is millennia older than interstellar piracy).

LARGE SPACECRAFT TABLE

Type	Base Equation
DropShip	(Cost in CB / 50,000,000), round up to the nearest whole number + 5
JumpShip	(Cost in CB / 100,000,000), round up to the nearest whole number + Number of Docking Collars
WarShip	(Square Root of [Tonnage / 5,000]), round up to the nearest whole number + (Square Root of Number of Docking Collars), round up to the nearest whole number
Space Station	(Cost in CB / 50,000,000), round up to the nearest whole number
Miscellaneous	
Unique	+10. Applies to spacecraft for which less than 10 exist in an era. (Example: most Inner Sphere WarShips in the 31st century)
Very Rare	+6. Applies to spacecraft for which less than 100 exist in an era (Example: Monoliths in the 31st century, almost all WarShips)
Rare	+3. Applies to less common spacecraft for an era (Example: Scouts, Tramps, Mammoths, Star Lords in the 31st century).
Average	+0. Applies to most spacecraft by default.
Common	–1. Applies to particularly prolific spacecraft (Examples: Mules, Invaders, Merchants.)
Lithium-Fusion Battery	+2
Military	+1. Military spacecraft are more controlled and more difficult to acquire than civilian forces.
Government Force	-2. Government forces have better access to large spacecraft than others. This only applies to non-Clan factions.
Clan Force	-4. Clans have maintained a large inventory of spacecraft from the Exodus and a high level of technology.

Inner Sphere/ Periphery era	Modifier	Crew Skill	Modifier
2100-2412	–3	Green	–1
2412-2570	–4	Regular	0
2571-2650	–5	Veteran	+1
2651-2750	–6	Elite	+3
2751-2820	–6		
2821-2900	–2		
2901-3049	+0		
3050-3067	–1		
3068-3084	-2		
3084-3130	+0		

For this mobile, independent troubleshooting company, Arnold figures a DropShip and a JumpShip are required. He's been fiddling with the DropShip construction rules in Tech Manual and figures a modified Union would be perfect, but Arnold's gamemaster is resistant to the notion of rebuilding DropShips on a whim (especially in 3025, when bottle rockets are more the speed of Inner Sphere shipyards). They compromise on the Seeker, which is noted for its flexible vehicle bays. Arnold runs up the cost of the Seeker using Tech Manual, finding it to be 225,829,968CB. He puts it through the DropShip equation:

[(225,829,968CB / 50,000,000CB) rounded up] + 5 = 10

The Seeker is not particularly rare or common (at least, TR: 3057 does not indicate it is rare), so there is no availability modifier. In 3025, the Inner Sphere / Periphery era modifier is +0. As Arnold is making an Inner Sphere government force, he has a –2 bonus. On the other hand, the Seeker is definitely a military vessel, so there is a +1 penalty. In total, Arnold needs to roll a 9 or better on 2D6 to get the Seeker. He rolls an 11, so his force gets the Seeker and he enters that into the force's TO&E.

Next: a JumpShip. The common military transport is an Invader, so Arnold rolls for that. Figuring he already has a bunch of large lasers in the company, he picks the large laser variant of the Invader and calculates its cost using Strategic Operations as 670,797,750CB. Running it through the basic JumpShip equation, he gets:

[(690,797,750CB / 100,000,000), round up to the nearest whole number] + 3 collars = 10

The Invader is distinctly common—DropShips & JumpShips claims it is the most common JumpShip operating in the Inner Sphere in 3025, so that's a –1. Arnold is making a government force, so that's another –2, and the era modifier is 0, so the current target number is 7. That's relatively easy, so Arnold decides to gamble for a Veteran crew (+1), which takes the target to 8. Arnold rolls an 8, acquiring the Invader. That, too, goes into the TO&E. Noting the Invader has a pair of small craft bays, Arnold considers going back to Step 1 to purchase another pair of fighters, but decides to save that for later.

ARNOLD'S WORKSHEET

Subforce	Experience	Ammo Tons	Ammo Cost	Spare Parts Tons	Spare Parts Cost	Fuel Tons	Fuel Cost	Personnel
TDR-5S Thunderbolt	Regular	—	—	—	—	—	—	—
TDR-5S Thunderbolt	Regular	—	—	—	—	—	—	—
GHR-5H Grasshopper	Regular	—	—	—	—	—	—	—
GHR-5H Grasshopper	Regular	—	—	—	—	—	—	—
Bulldog	Regular	—	—	—	—	—	—	—
Bulldog	Regular	—	—	—	—	—	—	—
Bulldog	Regular	—	—	—	—	—	—	—
Bulldog	Regular	—	—	—	—	—	—	—
Foot Laser Platoon	Regular	—	—	—	—	—	—	—
Packrat	Regular	—	—	—	—	—	—	—
Packrat	Regular	—	—	—	—	—	—	—
Packrat	Regular	—	—	—	—	—	—	—
Packrat	Regular	—	—	—	—	—	—	—
CSR-V12 Corsair	Regular	—	—	—	—	—	—	—
CSR-V12 Corsair	Regular	—	—	—	—	—	—	—
Seeker DropShip	Regular	—	—	—	—	—	—	—
Invader JumpShip	Veteran	—	—	—	—	—	—	—

STEP 3: FORCE SPECIALTIES

Force specializations are best handled in campaign play (see *Force Operations*, p. **XX**), but some minimal modifiers are available for forces that want to start with certain extra abilities or deficiencies. The player building the force may add up to 2 absolute points of specializations (positive or negative points) in force creation (that is, two +1s, a +1 and a –1, or two –1s). Specializations are not available to large spacecraft in force creation.

Each specialization comes with a cost multiplier applied to the total cost of the force as determined in Step 1. A player desiring a positive force specialization thus has leftover funds. On the other hand, a force that has run somewhat over budget may find a negative force specialization to be a handy way of lowering costs. This force specialization modifier is not considered in contract negotiations (see *Force Operations*, p. **XX**) as having modified the cost of the combat units in the force.

Multipliers are applied in sequence. For example, if a force with a total cost of ten million C-bills of equipment and personnel (excluding large spacecraft) decides to start with a +1 Initiative in mountainous terrain and a +1 Piloting Skill for melee attacks, then the total cost is 10,000,000 x 1.1 x 1.75 for a total cost of 19,250,000 C-bills.

STEP 4: LEFTOVER FUNDS

After spending funds in Steps 1 and 3, the controlling player should note leftover funds. These may be used to cover excessive expenses, purchase supplies, and support the force during lulls in employment. These funds may not be used to purchase vehicles or hire infantry (except to purchase small support vehicles that are presumably utility vehicles), and thus it is recommended that players expend these funds before any profits from operations.

Arnold notes from Step 1 he has 15,185,494CB left. He's going to determine his operating expenses in Stage 4 before spending these funds on supplies.

STEP 5: DETERMINE SUPPORT PERSONNEL

A force consists of more than frontline soldiers. It also requires administrators (for everything from contract negotiation to payroll to procurement to medical services), technicians, and logistics personnel. This step addresses the minimum mandatory "behind the scenes" support personnel. Players interested in combat engineers, MASH forces, and other non-mandatory supporting personnel may acquire them under Step 1.

Support personnel are calculated in two sub-steps: technical support personnel and administrative personnel.

These personnel are not purchased like infantry, but are automatically assigned per the calculations below. Later, in Stage 4, support personnel will require salaries, and they will also require transport along with combatant personnel to new assignments (see Operations, p. **XX**). Both of these factors may incline the controlling player to trim the numbers of support personnel, even at the risk of compromising force performance and costs.

Technical Personnel

The minimum technical support personnel are outlined in *Strategic Operations*, page 168. A technician team consisting of a tech and six astechs is required for each combatant, and for purposes of force creation is rigidly assigned to each specific combatant:

'Mech(BattleMech, OmniMech, IndustrialMech)
Fighter (Aerospace or Conventional)
ProtoMech Point (5 ProtoMechs)
Vehicle
Battle Armor Point (5 Battle Armors)
Infantry Company (84 infantry)

FORCE SPECIALIZATION TABLE

Specialization	Multiplier
+1 to force's Initiative in specific terrain type (e.g., mountains or forest)	x1.1
+1 to force's Initiative in general terrain type (e.g., restricted or open)	x1.25
+1 to force's Initiative against foe type (e.g., Capellans or Clans)	x1.25
+1 to force's Piloting/Driving in specific terrain type (e.g., mountains or forest)	x1.25
+1 to force's Piloting/Driving in general terrain type (e.g., restricted or open)	x1.5
+1 to force's Piloting/Driving for melee attacks	x1.75
+1 to force's Gunnery in specific terrain type (e.g., mountains or forest)	x1.75
+1 to force's Gunnery in general terrain type (e.g., restricted or open)	x2
+1 to force's Gunnery against foe type (e.g., Capellans or Clans)	x2
-1 to force's Initiative in specific terrain type (e.g., mountains or forest)	x0.95
-1 to force's Initiative in general terrain type (e.g., restricted or open)	x0.9
-1 to force's Initiative against foe type (e.g., Capellans or Clans)	x0.9
-1 to force's Piloting/Driving in specific terrain type (e.g., mountains or forest)	x0.9
-1 to force's Piloting/Driving in general terrain type (e.g., restricted or open)	x0.8
-1 to force's Piloting/Driving for melee attacks	x0.8
-1 to force's Gunnery in specific terrain type (e.g., mountains or forest)	x0.75
-1 to force's Gunnery in general terrain type (e.g., restricted or open)	x0.7
-1 to force's Gunnery against foe type (e.g., Capellans or Clans)	x0.7

For the ProtoMechs, battle armor and infantry, add up all similar forces and divide that sum by the listed number (5 ProtoMechs, 4 Battle Armors, 84 infantry), rounding normally to the nearest whole number. That figure is the number of tech teams required. For example, a force with 3 Inner Sphere Battle Armor squads, or 12 Battle Armors, would require 12 / 5 = 2.4, rounding down to 2 tech teams for its Battle Armor. A force with a single Battle Armor squad would require 4 /5 = 0.8, rounding up to 1 tech team.

Large support vehicles and large spacecraft do not require separate technical support personnel, as this is a function of their crew.

Technical support personnel have, by default, a Regular skill level. The controlling player may freely alter this to Green to reduce salaries, but raising the skill to Veteran or Elite requires a roll for each tech team with improved skills. Making a tech team Veteran requires a 2D6 roll of 9 or higher, while making the tech team Elite requires a roll of 11 or higher. The controlling player may roll for a higher skill level once for each tech team; a roll to get an Elite tech team cannot be used to get a Veteran tech team, or vice versa.

Technical support personnel teams also address logistics support for their associated combat forces. No personnel are better for hauling tons of ammunition across a battlefield in thinly armored support vehicles than junior astechs, a fact that all MechWarriors and senior techs agree on.

After calculating the basic number of technical personnel, the controlling player may opt to reduce that number by having combatants pull double duty supplying technical support. For example, it is quite common in some factions and eras for MechWarriors to maintain their own 'Mech, or tank crews to perform basic maintenance on their own vehicles. Combatant personnel serving as technical personnel are less efficient because of their doubled work load. Combatant personnel pulling double duty as technical personnel act as half a dedicated tech, while during combat operations a double-duty combatant only counts as a third of a dedicated tech. Further, only a quarter (round up) of all combatant personnel may pull this double duty; not all combatants are suited or trained for it.

The controlling player selects how many, if any, combatant personnel pull double duty, multiplies them appropriately for peacetime or combat operations (rounding up), and subtracts that from the basic number of technical personnel. (It is recommended that double duty personnel be calculated as being in combat operations to avoid overestimating available technical support personnel.) The resulting number is the amount of dedicated technical personnel, which is needed for subsequent salary calculations in Stage 4.

Administrative Personnel

The basic administration requirements are one dedicated administrator per ten non-administrative members of the force, rounded up. To determine the number of non-administrative personnel, add together the following, then divide by 10 and round up:

Technical personnel calculated above

1 person per 'Mech

1 person per fighter

1 person per ProtoMech

1 person per 15 tons of combat vehicle, round up (calculate each vehicle separately)

1 person per crewman required by support vehicle (see appropriate Technical Readout)

1 person per crewman required by large spacecraft (see appropriate Technical Readout)

1 person per trooper in a battle armor force

1 person per infantryman in an infantry force

Combat personnel can supply some administrative work, but combat personnel serving such double duty are less efficient than dedicated administrators. During peacetime (see *Force Operations*, p. **XX**, for peacetime versus combat period definitions), a combatant can act as half a dedicated administrator, or one-third of a dedicated administrator during combat operations. Further, only a quarter (round up) of all combatant personnel may pull this double duty (less any combatants pulling technical double duty; see above), as not all combatants are suited or trained for it.

The controlling player selects how many, if any, combatant personnel pull administrative double duty, multiplies them appropriately for peacetime or combat operations (rounding up), and subtracts that from the basic number of administrators. (It is recommended that double duty personnel be calculated as being in combat operations to avoid overestimating available administrative personnel.) The resulting number is the amount of dedicated administrators, which is needed for subsequent salary calculations in Stage 4.

Administrative personnel do not have a skill rating (in a manner that affects game play); they are treated as Regular for salary purposes in Stage 4.

Finally, government forces may reduce their administrative personnel needs by 50 percent (round up), reflecting support from the rest of the government.

Arnold has four 'Mechs, eight vehicles, two fighters, one infantry platoon, one Seeker*-class DropShip, and 1* Invader*-class JumpShip. The 14 fighters, 'Mechs, and vehicles each require one tech and six astechs, for a total of 14 techs and 84 astechs. The infantry platoon is not large enough to require a tech team (28 infantry / 84 = 0.33, rounded to 0). The JumpShip and DropShip do not require separate technical support personnel. Arnold notes the 14 techs and 84 astechs on the TO&E sheet in the support personnel section. He decides to gamble on making the tech teams Elite; Elite techs are worth their weight in gold. He rolls 14 times, getting two successes for the first* Grasshopper*'s tech team and for the second* Corsair*. The other 12 teams are left as Regular.*

Next, he begins filling in the personnel column for the TO&E in preparation for calculating the number of administrative personnel. Each 'Mechand fighter has one MechWarrior or pilot, respectively, while the four 60-ton Bulldogs have four personnel each. The four 20-ton Packrats have two crewmen each, and their associated foot infantry platoon represents 28 infantry. The Seeker *has a crew of 20 (not counting the bay personnel, which are the rest of the force's non-JumpShip personnel). The* Invader *has a crew of 24, again not counting bay personnel (Arnold hasn't assigned any small craft or fighters to the* Invader*). That's 102 combatants.*

With the 98 technical personnel, Arnold's Davion company thus has a total of 200 personnel so far. According to this step, a force requires one administrator per ten non-administrative personnel (rounded up), the company needs 20 administrative personnel. Being a government force, this can be cut in half (rounded up) to 10. Arnold enters the number of administrators into the TO&E also.

ARNOLD'S WORKSHEET

Subforce	Experience	Ammo Tons	Ammo Cost	Spare Parts Tons	Spare Parts Cost	Fuel Tons	Fuel Cost	Personnel
TDR-5S Thunderbolt	Regular	—	—	—	—	—	—	1 MW
TDR-5S Thunderbolt	Regular	—	—	—	—	—	—	1 MW
GHR-5H Grasshopper	Regular	—	—	—	—	—	—	1 MW
GHR-5H Grasshopper	Regular	—	—	—	—	—	—	1 MW
Bulldog	Regular	—	—	—	—	—	—	4 crew
Bulldog	Regular	—	—	—	—	—	—	4 crew
Bulldog	Regular	—	—	—	—	—	—	4 crew
Bulldog	Regular	—	—	—	—	—	—	4 crew
Foot Laser Platoon	Regular	—	—	—	—	—	—	28 infantry
Packrat	Regular	—	—	—	—	—	—	2 crew
Packrat	Regular	—	—	—	—	—	—	2 crew
Packrat	Regular	—	—	—	—	—	—	2 crew
Packrat	Regular	—	—	—	—	—	—	2 crew
CSR-V12 Corsair	Regular	—	—	—	—	—	—	1 pilot
CSR-V12 Corsair	Regular	—	—	—	—	—	—	1 pilot
Seeker DropShip	Regular	—	—	—	—	—	—	20 crew
Invader JumpShip	Veteran	—	—	—	—	—	—	24 crew
Totals								**102 total**
Support Personnel								
12 Tech Teams	Regular	—	—	—	—	—	—	12 techs, 72 astechs
2 Tech Teams	Elite	—	—	—	—	—	—	2 techs, 12 astechs
Administrators	Regular	—	—	—	—	—	—	10 admins

STAGE 4: DETERMINE OPERATING EXPENSES

STEP 1: COMPLETE THE TO&E

This stage figures out what costs (monetary and material) the force has regardless of actual income (which is addressed in Operations).

This is not a difficult step, but it is detailed and, for larger forces (especially those with complicated compositions), time consuming. However, it provides a detailed and accurate representation of the force's operating costs and supply consumption.

Each vehicle, 'Mech, ProtoMech, fighter, and large spacecraft should be entered into the TO&E sheet individually (not by lance, platoon, etc.), and each infantry force (conventional or battle armor) should be entered at the squad/Point level. Several calculations for each entry then follow, for ammunition, spare parts, fuel and salaries.

Ammunition: For each ammo-using vehicle and infantry force, the controlling player must decide what type of ammo is carried for each weapon. For example, a player with an ARC-2R *Archer* in a 3067-era force may select the *Archer* to carry two tons of Thunder LRMs and two tons of semi-guided LRMs. After making the decision, the controlling player must decide on the monthly usage of ammunition. The peacetime consumption is one-quarter of the vehicle's or infantry force's ammunition capacity to maintain the skills of the force, so the simple approach is to divide the tonnage and cost of the ammunition by 2. However, if usage varies due to combat or accelerated training, the actual consumption must be noted.

Ammunition weights for any unit other than conventional infantry may be found in the appropriate TRO. Conventional infantry should refer to *A Time of War*, pp. 260-285, for ammunition costs and weights, and are assumed to carry five reloads for their weapons as a standard combat load. If the infantry are armed with non-plasma energy weapons and are often stationed with fission- or fusion-powered vehicles (for example, they spend a maintenance cycle with such a vehicle after a maintenance cycle involving combat), the ammunition cost is divided by 10 because the power packs may be recharged for free and only worn or damaged packs need replacing.

Spare Parts: Unlike ammunition, fuel and salaries, peacetime consumption of spare parts is generally abstract (unless an incident during force operation results in distinct damage). Monthly generic spare part consumption (by tonnage) is 0.1 percent of a vehicle, DropShip, WarShip, or battle armor unit's mass. Conventional jump, mechanized, and motorized infantry consume 1 percent of a squad infantry compartment's mass. Space stations and JumpShips, which are lightly stressed vehicles, only use 0.01 percent of their mass in spare parts per month. The cost of the generic spare parts is 10,000 C-bills per ton for 'Mechs and infantry, 8,000 C-bills per ton for vehicles, and 15,000 C-bills per ton for fighters and large spacecraft.

Battle damage that results in specific losses (for example, engine damage to a BattleMech) may be debited from this monthly average spare part tonnage and costs before incurring extra costs.

Fuel: Monthly fuel consumption is based on a force's fuel capacity and usage rate. Fuel capacity is fairly easy to determine, except for jump-capable battle armor and infantry. Fighters, large spacecraft, IndustrialMechs, and support vehicles have clearly established fuel tonnages listed in TROs. Combat vehicles (see p. 34, *Strategic Operations*) have a fuel capacity equal to 2 percent of their engine mass. Jump, mechanized, and motorized conventional infantry use fuel equal to 2 percent of the mass of the infantry compartment able to carry them. Jump-capable battle armor use fuel equal to 2 percent of their mass.

Fuel costs are listed on page 179 of *Strategic Operations*. Conventional fighters use petrochemicals (turbine) or hydrogen (fusion); combat vehicles use petrochemicals (internal combustion) or hydrogen (fuel cell); support vehicles use fuel as listed in their TRO; and aerospace fighters and large spacecraft use hydrogen.

Peacetime fuel usage rates are assumed to be equal to four times the fuel capacity of the 'Mech, vehicle, fighter and infantry forces, representing the relatively limited operations of combat forces in training and minimal maneuvering for maintenance. DropShips and WarShips are assumed to use 15 burn-days of fuel per month, while JumpShips and space stations are assumed to use 3 burn-days per month for station-keeping. (This may vary

SALARY TABLE

Position	Monthly Salary
MechWarrior	1,500
Aerospace Pilot	1,500
Vehicle/Artillery Crewman	900
Aircraft Pilot	900
Regular Infantry	750
Specialist/Armor Infantry	960
Vessel Crewman (DropShip)	1,000
Vessel Crewman (JumpShip)	750
Vessel Crewman (WarShip)	1,200
Technician	800
Astech	400
Administrator	500
Quality/Expertise	**Multiplier**
Green	x0.6
Regular	x1.0
Veteran	x1.6
Elite	x3.2
Anti-BattleMech Training (Infantry only)	x1.5
Rank	**Multiplier**
Officer	x1.2
Rank	(Rating/2)+1

depending on actual operations. For example, a DropShip that is kept running on a side job as a merchant freighter will spend more burn-days of fuel. As another example, a JumpShip that recharges with its fusion engine once in a month will spend 13 burn-days of fuel [10 for recharging, 3 for station-keeping] rather than 3.)

Combat operation fuel usage is determined per pages 34-35 of *Strategic Operations*, with the controlling player tracking the number of maintenance cycles that units are in operation.

Salaries: After assigning the peacetime monthly costs to each element in the TO&E sheet, total the number of personnel by type (noting the supporting personnel calculated in Stage 3, Step 5) and multiply each type of personnel (by position and skill as appropriate) by the salaries listed in the Salary Table. This is the force's monthly salary requirement.

Arnold figured that a small force would be easier to manage, and he was correct, but the mixed bag of vehicles and weaponry makes for some work calculating salaries. The two TDR-5S Thunderbolts *each carry 2 tons of LRM ammo, 1 ton of SRM ammo, and 1 ton of MG ammo. Noting that peacetime usage of ammo is one-quarter of a 'Mech's capacity per month, Arnold enters 0.5 tons of LRM ammo, 0.25 tons of SRM ammo, and 0.25 tons of MG ammo for each* Thunderbolt*. Arnold realizes the decision to make this a 3025-era force is saving him work because he doesn't have to address the wide range of ammunition introduced after 3050, like Thunder mines or semi-guided missiles and what mix the* Thunderbolt*s would carry in a given month. The cost for the* Thunderbolt *ammunition is 30,000CB per ton of LRM ammunition, 27,000CB per ton of SRM ammunition, and 1,000CB per ton of MG ammunition: 22,000CB per* Thunderbolt *per month. Arnold enters this into the TO&E sheet for each* Thunderbolt*.*

After practicing with the Thunderbolt*s, Arnold finds the rest of the force fills in faster. The* Grasshopper*s are simple: they carry 1 ton of LRM ammunition each, so Arnold enters 0.25 tons for each into the sheet at 7,500CB each per month. The Bulldogs have 2 tons of SRM and 1 ton of MG ammunition each, which Arnold quarters as he enters into the TO&E sheet (for 13,750CB per tank). The Packrats have 3 tons of SRM ammunition each, which becomes 0.75 tons and 20,250CB in the TO&E sheet. The* Corsair*s are mercifully ammunition-free, which makes an entry in the TO&E sheet Arnold likes a lot and provides a lesson for the next force he creates. The* Seeker*, to Arnold's surprise, only has 2 tons of LRM ammunition; he's used to DropShips with a wide array of ammunition-guzzling weaponry. Arnold notes 0.5 tons of LRM ammunition in the TO&E for the* Seeker*. The* Invader *is also a no-brainer, being an energy-only unit.*

Per the example of a motorized laser platoon's construction in Tech Manual*, pp. 145-155, Arnold notes each trooper in his infantry platoon has a standard laser rifle, which (per p. 267,* A Time of War*) may have a range of "ammunition" types. Looking at the power packs on p. 306 of A Time of War, Arnold figures the Standard Military Power Pack would apply, and each infantryman (per Step 4b) should carry 5 of those heavy packs. Doubling that consumption per month to represent training, Arnold notes that consumption is 400CB and 40kg per trooper per month: 11,200CB and 1.12 tons per month for the platoon. Fortunately, Arnold's infantry platoon will be stationed with the fusion-powered Packrats and thus the consumption is divided by 10: 1,120CB and 0.112 tons per month.*

Arnold moves on to spare parts. The BattleMechs, at 65 and 70 tons each, use 0.065 and 0.070 tons of spare parts per month (0.1 percent of their mass), respectively. At 10,000CB per ton, that's 650 and 700CB per 'Mech. Arnold enters that into the TO&E sheet. This isn't much, but Arnold notes it only represents replacement of normal "wear parts" in a 'Mech. A pratfall by a 'Mechduring training could wreck a ton of armor or cripple an important component, which would be much heavier and more expensive.

The Bulldogs each use 0.060 tons of spares per month, while the Packrats use 0.020 tons. Vehicle spare parts are less expensive than 'Mechparts at 8,000CB per ton. The infantry platoon would fit in a 3-ton foot infantry compartment, so it uses 0.03 tons of spare parts per month (at 1 percent of the compartment's mass, not 0.1 percent) and costing 10,000CB per ton. Arnold figures this represents weapon components, broken body armor, and other equipment that an infantry platoon would regularly draw. The 50-ton Corsair*s consume 0.050 tons per month at 15,000CB per ton of the pricey, high-tech aerospace components, while the 6,700-ton* Seeker *uses 6.7 tons (100,500CB) per month and the* Invader *(at 0.01 percent of its mass) uses 15.2 tons (228,000CB) per month. Arnold enters all these into the TO&E sheet.*

Fuel is simple for the 'Mechs, foot infantry and Packrats: Arnold fills in 0 for all of those. The spacecraft and fighters are also easy. The Corsairs each hold 5 tons of fuel and peacetime usage is four times that per month: 20 tons of hydrogen each. The Seeker uses 1.84 tons of fuel per day spent burning at 1G and thus uses 27.6 tons per month, while the Invader has 19.75 tons per burn-day and uses 59.25 tons per month holding station against the local star's gravity. Hydrogen runs 15,000CB a month, making Arnold wince. He consults p. 179 of Strategic Operations *and decides he's definitely going to have to exploit the ability of military forces to convert local water supplies into hydrogen or keep his DropShip on the landing pad.*

The Bulldogs take a little more work, since their fuel isn't specified. Arnold looks up their engine mass (23 tons). Two percent of that is 0.46 tons each, and the tanks use 4 full fuel loads per month: 1.84 tons per month each. The engines are internal combustion, so the fuel is petrochemicals at 1,000CB per ton: 1,840CB. Arnold enters those results into the TO&E.

Finally, salaries. Since a majority of his combatants are Regular, Arnold quickly references the Salary Table. His MechWarriors and fighter pilots earn 1,500CB per month (which might change for PCs with the Rank benefit), his vehicle crews earn 900 a month each, infantry 750 a month, DropShip crew 1,000 a month (1,200 for the 4 officers), 12 regular techs 800 a month, 72 regular astechs 400 a month,

and 10 administrators 500 a month. The JumpShip crew's base salary (750 a month, or 900 for the 4 officers) is multiplied by 1.6 because the crew is Veteran (to 1200 / 1440 a month), and the two Elite tech teams have their pay multiplied by 3.2 (to 2,560 for the techs and 1,280 for the astechs). He totals these values for each unit on the TO&E sheet.

ARNOLD'S WORKSHEET

Subforce	Experience	Ammo Tons	Ammo Cost	Spare Parts Tons	Spare Parts Cost	Fuel Tons	Fuel Cost	Personnel	Salaries
TDR-5S Thunderbolt	Regular	0.5 LRM, 0.25 SRM, 0.25 MG	22,000	0.065	650	0	0	1 MW	1,500
TDR-5S Thunderbolt	Regular	0.5 LRM, 0.25 SRM, 0.25 MG	22,000	0.065	650	0	0	1 MW	1,500
GHR-5H Grasshopper	Regular	0.25 LRM	7,500	0.070	700	0	0	1 MW	1,500
GHR-5H Grasshopper	Regular	0.25 LRM	7,500	0.070	700	0	0	1 MW	1,500
Bulldog	Regular	0.5 SRM, 0.25 MG	13,750	0.060	480	1.84P	1,840	4 crew	3,600
Bulldog	Regular	0.5 SRM, 0.25 MG	13,750	0.060	480	1.84P	1,840	4 crew	3,600
Bulldog	Regular	0.5 SRM, 0.25 MG	13,750	0.060	480	1.84P	1,840	4 crew	3,600
Bulldog	Regular	0.5 SRM, 0.25 MG	13,750	0.060	480	1.84P	1,840	4 crew	3,600
Foot Laser Platoon	Regular	0.112 power packs	1,120	0.030	300	0	0	28 infantry	21,000
Packrat	Regular	0.75 SRM	20,250	0.020	160	0	0	2 crew	1,800
Packrat	Regular	0.75 SRM	20,250	0.020	160	0	0	2 crew	1,800
Packrat	Regular	0.75 SRM	20,250	0.020	160	0	0	2 crew	1,800
Packrat	Regular	0.75 SRM	20,250	0.020	160	0	0	2 crew	1,800
CSR-V12 Corsair	Regular	0	0	0.050	750	20H	300,000	1 pilot	1,500
CSR-V12 Corsair	Regular	0	0	0.050	750	20H	300,000	1 pilot	1,500
Seeker DropShip	Regular	0.5 LRM	15,000	6.7	100,500	27.6H	414,000	16 crew, 4 officers	20,800
Invader JumpShip	Veteran	0	0	15.2	228,000	59.25H	888,750	20 crew, 4 officers	29,760
12 Tech Teams	Regular	0	0	0	0	0	0	12 techs, 72 astechs	38,400
2 Tech Teams	Elite	0	0	0	0	0	0	2 techs, 12 astechs	20,840
Administrators	Regular	0	0	0	0	0	0	10 admins	5,000
Totals	—	**2 LRM, 5.5 SRM, 0.75 MG, 0.112 PP**	**211,120**	**22.72**	**335,560**	**7.36P, 126.85H**	**1,910,110**	**210**	**102,160**

STEP 2: CALCULATE PEACETIME COSTS

After filling out the TO&E sheet, total the ammunition, spare parts, and fuel costs and tonnages. These are the peacetime costs of operating the force. These costs must be updated for any changes in personnel, ammunition, and vehicles.

Arnold has already done this, as he finished Step 1 when filling out the TO&E sheet. He notes that his force consumes about 8 tons of mixed ammo a month, almost 23 tons of parts (mostly keeping the vital DropShip and JumpShip operating), and over 130 tons of fuel (though admittedly, a lot of that he can supply given a pond or river near the force's base). Expenses are eye-opening: as important as salaries (102,160CB) are to the characters of the force, they're the least of his costs. The company will be paying nearly two million in fuel costs per month (though that drops to 7,360CB if Arnold finds a sizable body of water), 335,560CB per month to keep the equipment in functional shape, and 211,120CB to keep the force's skills in fighting trim with ammunition expenditures.

Arnold now gives the 15,185,494CB left in Stage 3, Step 4 a good look. He can certainly stockpile a good amount of ammunition and spare parts, and perhaps look through Technical Readout: Vehicle Annex for some jeeps and other utility vehicles. Or he can leave it as a cash reserve for the force's lean times.

OPTIONAL CONSTRUCTION RULES

Players may use the following optional rules at their discretion.

ALTERNATE FLEXIBLE FORCE CONSTRUCTION

The basic force budget assumes the controlling player does not have a particularly strong opinion about what size and type of force is being built. A random roll also neatly addresses the difficulty of producing balanced rules for creating forces ranging from lances to divisions, in eras ranging from the 2300s to 3100s, for multitudes of factions and with widely varying technology.

Other players may have very specific ideas about their personal military forces. Maybe they're hand-built forces resulting from years of roleplaying or just a spur-of-the-moment fulfillment of a wish to see a customized regiment of giant, stompy robots marching across a TO&E sheet, but they're not something that can be generated through the restrictions of random budget rolls.

Instead of following Stages 2 and 3 of Force Construction, a controlling player using this rule selects whatever equipment and personnel suits him, making the force as large or small, rich or poor as desired. Two considerations provide restrictions and guidance on this apparent "blank check":

First, if there is a gamemaster for the campaign, he must approve the force. If there is no gamemaster, then other players who will be using and facing the force must approve it.

Second, starting cash is not unlimited. Roll 1D6 twice. If the result is an odd number, treat it as -1. If the result is even, treat it as 1. Multiply that by 2D6 and then by the force's peacetime monthly operating costs. The final number is the current amount of money in the bank (or debt) the force possesses.

PLAYER CHARACTER INFLUENCES

Player character traits may influence the starting budget of a force, adding another multiplier to the budget in Stage 2, Step 2. Only the PC (or NPC) designated as the force's leader influences the starting budget. To calculate the influence modifier, add together the trait points (see p. 107, *A Time of War*) of each of the following positive or negative traits: Connections, Gregarious, Rank, Property, Reputation, Wealth, and Enemy. Add to that sum the leader's skill ratings in Administration and Negotiation. Divide the result by 10 and round up to the nearest whole number. The final result is a multiplier applied to the starting budget after era and faction multipliers.

DEPENDENTS

Some forces may relocate from garrison to garrison with some or all of their dependents—spouses, children, other family members, war brides, servants, camp followers, and/or slaves as the case may be—and these pose an additional logistical burden.

This optional rule presents guidance on recommended numbers of dependents, and how those numbers affect transport and consumable requirements. Housing, feeding, clothing, and employing dependents are beyond the scope of these rules, though it is suggested that if force personnel associated with the dependents are making an adequate wage, their pay will provide for their dependents. (Obviously, dependents may hold their own jobs outside the force, but that does not affect the force's budget.)

Dependents rarely, if ever, travel with a force on a combat mission. They only pose a transport issue when the force is relocating to a new base where it will remain for an extended period of time. Furthermore, many soldiers do not bring dependents with them, understanding that after some months or years the soldier can individually (separate from the force) return home to a family far from harm's way. Pirates leave their dependents at their pirate's den; government forces may leave dependents scattered across the many worlds of their realm; and mercenaries, drawn from thousands of settled worlds, may leave their dependents behind. In fact, usually only very large, cohesive, long-lasting military forces such as Wolf's Dragoons, making a very permanent move, uproot close dependents (spouses, children, and/or servants); in many eras, the commonality of interstellar travel meant few forces bothered to budget for such moves.

To reflect this, the number of dependents for any force is handled somewhat randomly. Roll 1D6, divide the result by 2, round up to the nearest whole number, and multiply that by

the number of combatant and support personnel in the unit. The final result is the number of dependents that the force travels with from base to base.

These dependents are added to the total personnel in the force for transportation purposes (see Transportation Rating under *Reputation*, p. **XX,** *Force Operations*). Furthermore, forces with limited budgets for consumables (see p. 155, *Strategic Operations*) also need to consider dependents and the type of quarters in which they are transported.

RANDOM BACKGROUNDS

If players do not have a fully formed idea for their force's background, or prefer some background that will influence the force's capabilities, they may make a couple of rolls to see what sort of background results they obtain from the Force Random Background Table.

The first roll to make is 1D6 ÷ 2. The result determines how many times the force may roll on the Force Random Background Table, which uses 3D6 for each roll.

The primary effects of the random background are to modify the force's reputation (see Force Operation, p. **XX**) or grant a force specialization. It is up to the controlling player (or gamemaster, if present) to fill in the details of the resulting events.

TAKING ON DEBT

If a mercenary or government force's budget in creation is insufficient, the controlling player may go into debt to buy additional equipment. The limit of starting debt is equal to the force's final budget determined in Stage 2, Step 2 (noting the influence of Force Specialties in Stage 3). That is, the controlling player may double the budget. (Pirates cannot take on debt at force creation, being too disreputable to receive loans.)

Taking on debt has two disadvantages. First, it applies a negative modifier to the force's starting reputation (see *Force Operations*, p. **XX**). Second, it must be paid off.

Paying off debt adds to the force's peacetime operating costs. The simplistic method presented here is that the lender adds 1 percent of the debt to the monthly peacetime operating cost until a value equal to 150 percent of the original debt is paid off. If the force comes into extra funds, the debt may be paid off earlier, but the payoff must still be equal to 150 percent of the initial debt.

Forces unable to make their debt payments refer to the debt rules in *Force Operations*, page **XX**.

Players are welcome to use more realistic payment plans, such as continuously compounded interest rates or different repayment schedules, and incorporate the effects of early principal payoffs, so long as a gamemaster (if present) or other players in the group agree.

FORCE RANDOM BACKGROUND TABLE

3D6 Result	Background
3	Atrocity. The force committed a mass murder of innocents. –15 Reputation.
4	War criminals. The force committed a serious crime, accidentally killing many civilians; committed rape, or indulged in kidnapping. –10 Reputation.
5	Contract breach. The force violated a contract (if mercenary) or orders (if government). -25 Reputation. Ignore this result if a pirate force.
6	Textbook warriors. The force got into a rut, favoring fighting in certain conditions over others. The force now suffers a –1 Initiative in a general terrain type. This does not modify the force's cost.
7	Poor discipline. The force launched an unauthorized raid or indulged in looting. -5 Reputation.
8	Debt. The force loses any leftover funds from force creation and starts in debt at an amount equal to 1D6 times its peacetime monthly operating cost. -10 Reputation.
9-12	The force had a quiet year in a garrison or cadre mission.
13	Profitable year. After completing some missions successfully, the force's bank account is in the black. Delete any debt from force creation and give the force a bonus equal to 1D6 times its monthly operating cost.
14	Out-of-the-box thinkers. After repeated campaigns in unusual terrain, the force gains a +1 Initiative bonus in a specific terrain type. This does not modify the force's cost.
15	Hard training and experience pay off. The force gains a +1 Piloting/Driving bonus in a specific terrain type. This does not modify the force's cost.
16	The force has a string of successful missions and gains 1D6 x 5 Reputation points.
17	The force has a string of successful missions against one foe, learning best how to kill them dead. The force has a +1 Gunnery bonus against that faction. This does not modify the force's cost.
18	They came, they saw, they conquered. The force is almost unbeaten after years of hard combat, gaining 2D6 x 5 Reputation points.

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FORCE CREATION WORKSHEET

Force Name: ____________________

Subforce	Experience	Ammo Tons	Ammo Cost	Spare Parts Tons	Spare Parts Cost	Fuel Tons	Fuel Cost	Personnel	Salaries
	Totals:								

NOTES

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